Department of Veterans Affairs

Substance Use Disorders QUERI
Strategic Plan

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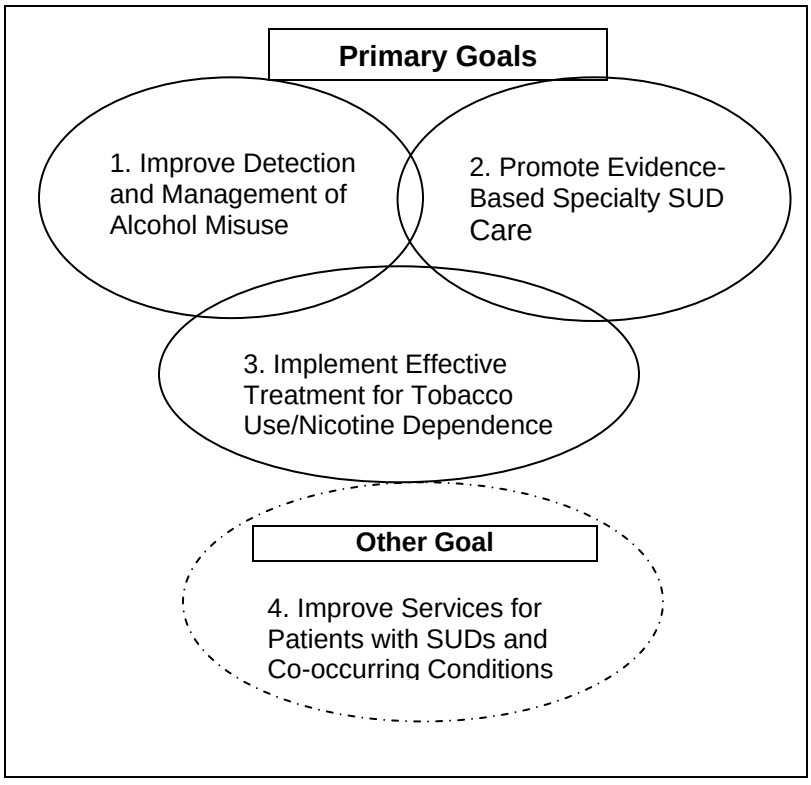
I. Introduction

Over the past year, important policy issues related to access to clinical services for veterans with Substance Use Disorders (SUDs) were addressed in the Handbook on Uniform Mental Health Services that is currently guiding implementation efforts within the Office of Mental Health Services (OMHS). SUDs are prevalent, debilitating, costly, and can be lethal. During FY07, almost 375,000 veterans seen in VHA had SUD diagnoses other than nicotine dependence; nearly 500,000 additional patients had nicotine dependence diagnoses without other SUDs. In collaboration with multiple partners, the SUD QUERI seeks to complement efforts of the OMHS to assure access to best practices for improving the detection and treatment of VHA patients who misuse psychoactive substances. We focus on patients whose substance use meets diagnostic criteria for abuse or dependence, but we also address patients' harmful drinking and use of tobacco (primarily cigarettes). Our purview also encompasses co-occurring infectious diseases and psychiatric disorders with the highest prevalence and disease burden as the co-morbidities of SUDs.

The SUD QUERI has four goals: (1) Improve detection and management of alcohol misuse in primary care; (2) Promote evidence-based specialty care for patients with SUDs by implementing patient-, provider- and organizational interventions to promote treatment retention, including opioid agonist treatment (methadone and buprenorphine) for opioid dependence; (3) Implement effective tobacco use cessation treatment; (4) Improve detection of and care for patients with SUDs and co-occurring (a) infectious diseases and (b) psychiatric disorders The SUD QUERI's four goals and their overlap are presented in Figure 1.

Figure 1. Overview of the goals of SUD-QUERI



II. Improve Detection and Management of Alcohol Misuse

A. Alcohol Misuse: Background

Alcohol misuse ranges from drinking above recommended limits without problems (risky drinking) to severe alcohol use disorders (alcohol dependence). Current research supports varying interventions for alcohol misuse depending on its severity and patients' readiness to change their drinking behavior. The majority of patients with alcohol misuse engages in risky drinking or has mild problems due to drinking without dependence, and these patients clearly benefit from brief alcohol counseling. Brief alcohol counseling may be delivered by non-specialists (e.g., primary care providers), and a meta-analysis by the former Research Coordinator of the SUD QUERI (e.g., Moyer et al., 2002) and a recent Cochrane review (Kaner et al., 2007), have concluded that brief alcohol counseling results in decreased drinking. Routine brief alcohol counseling with patients who screen positive for alcohol misuse is recommended in the VA/DOD Substance Use Disorders Guideline and by the U.S. Preventive Services Task Force (VA/DOD 1999; Whitlock, et al., 2004). Brief alcohol counseling was designated the 3rd highest US prevention priority based on the societal burden of alcohol misuse and its efficacy and cost-effectiveness (Maciosek et al., 2006; Solberg et al., 2008). A recent report demonstrated the efficacy of brief alcohol counseling by telephone (Brown, 2007).

Routine alcohol screening to identify patients with alcohol misuse is recommended (as an antecedent to brief alcohol counseling), because many patients with alcohol misuse are not identified by primary care or mental health providers in the absence of routine screening. Although the VA has implemented routine alcohol screening, implementation of routine brief alcohol counseling has proven challenging, in part because there is no well-defined, efficient method for measuring performance of brief alcohol counseling. The importance of performance measurement in mental health was addressed in a recent major report of the Institute of Medicine, but the report did not address measurement of brief alcohol counseling (Institute of Medicine, 2006).

Patients with severe alcohol dependence, serious mental illness, or medical contraindications to drinking usually have been omitted from trials of brief alcohol counseling because of expectations that these patients need specialized addictions treatment. Expert opinion and some research supports referral of these patients to specialty SUD care. For VA patients hospitalized with severe alcohol use disorders who are not willing or ready to engage in specialized addictions treatment, recent research supports repeated (e.g., monthly) patient-centered counseling and/or medication interventions delivered by nurses or other non-specialists (Willenbring, 2007; Willenbring & Olson; 1999, Fleming et al., 2004). This practice is recommended by the updated VA/DOD Substance Use Disorders Guideline (expected published 2009) and NIAAA Clinicians Guide (National Institute on Alcohol Abuse and Alcoholism, 2007).

Pharmacologic management for alcohol dependence also has known efficacy. Although many studies have shown that both Naltrexone and Acamprosate are effective treatments for alcohol dependence, results from the multi-site COMBINE study revealed that for alcohol dependent patients seeking alcohol treatment Naltrexone with medical management had modest but significant advantages over other combinations, and a reanalysis of the originally negative VA trial of naltrexone suggested a benefit in VA patients as well (Gueorguieva et al., 2007). Acamprosate and a state of the art behavioral intervention had no added efficacy compared to placebo and 9 sessions of medical management (Anton et al., 2006). Several recent trials have suggested that other medications commonly used in primary care are also efficacious for decreasing drinking (Johnson et al., 2007; Addolorato et al., 2007). However, no

study has demonstrated the efficacy of treating alcohol dependent primary care patients with naltrexone, although there is now evidence that for patients who respond to naltrexone continuing naltrexone management in primary care is efficacious (O'Malley et al., 2003). Further research is necessary and ongoing (Oslin et al., 2006) to determine best practices in this area.

1. Alcohol Misuse: Gaps in Current VA Practice

Research indicates that most patients who screen positive for alcohol misuse are not counseled by primary care providers. Important barriers to brief alcohol counseling have been: lack of standardized methods of identification of the eligible population (patients with alcohol misuse), the perception that alcohol misuse counseling is not central to the medical agenda, absence of a VHA national performance measure for brief alcohol counseling, multiple competing priorities during primary care and mental health visits, lack of necessary skills among some providers, and lack of consensus about methods for monitoring process or health outcomes among patients with alcohol misuse.

Brief alcohol screening and brief counseling for nondependent alcohol misuse. The VA successfully implemented routine alcohol screening with the AUDIT-C in 2004. Initial evaluations suggested that there were important differences between clinical screening and screening on patient surveys have been detected suggesting a need for further standardization. Specifically, clinical alcohol screening missed about 1/3 of the patients who were identified by the AUDIT-C on the Survey of Healthcare Experiences of Patients (SHEP) (prevalence was 24.6% and 33.4%, respectively). Further, patients who were excluded from required clinical alcohol misuse screening due to nondrinking often reported drinking on SHEP, and a small proportion of these excluded patients (5%) screened positive for alcohol misuse on SHEP. Analyses of SHEP also demonstrated that only about 29% of patients with alcohol misuse report advice from a VA provider and that the proportion of patients receiving advice increases with increasing alcohol misuse severity. Changes in specifications of the VAs alcohol screening performance measure in FY2008 were aimed at improving the validity of clinical alcohol screening, and evaluation of the impact of those changes will be necessary after data are available for EPRP and SHEP for an entire year after the new measure.

In 2007, analyses based on EPRP medical record review indicated that most patients who screened positive for alcohol misuse did not have documented brief alcohol counseling or completed referral. The SUD QUERI collaborated on a performance measure for brief alcohol counseling implemented in FY2008, and rates have been increasing since the clinical reminder for brief alcohol counseling developed by the SUD QUERI was disseminated in January 2008 (37% for the last quarter for which EPRP data have been analyzed). However, it is unclear whether increasing rates of *documented* brief alcohol counseling, where documentation occurs by checking a box in a clinical reminder, will be recalled by patients. It is also unclear whether certain organizational structures are associated with implementation of more effective brief alcohol counseling. Moreover, it will be essential to evaluate whether brief alcohol counseling is associated with the intended outcomes: decreased drinking and improved health. Therefore, there continue to be important gaps in current VA practice of brief alcohol counseling, including a need for improved quality of clinical screening and increased rates of effective brief alcohol counseling.

Severe alcohol misuse and alcohol dependence. Little is known about the proportion of patients with alcohol dependence who are referred for specialty care and the proportion who follow through with the referral, nor the proportion offered medications for alcohol dependence. However, the VA Large Health Survey in the late 1999 indicated that most patients with severe

alcohol misuse (> 4 drinks a day) reported they were not receiving the help they needed with their drinking (Kazis et. al., 1999). Research suggests that prescriptions for medications for alcohol dependence in VA are for very short periods of time (Hermos et al., 2004). Moreover, recent research by SUD QUERI investigators suggests that many patients with severe alcohol misuse have considered or tried to decrease their drinking (Williams et al., 2006). Although European research has shown that severe alcohol misuse is associated with 2-3 fold increased surgical complications, no US research has assessed this association.

2. Alcohol Misuse: Implementation Approach and Impact to Date

Major implementation foci to date have been helping the VHA achieve *readiness* for system-wide brief alcohol counseling and population based management for alcohol dependence. For example, activities have included education of quality managers via national videoconference presentations (QMICs), collaboration on the development of national performance measures for first screening and recently brief alcohol counseling, bringing a Clinical Applications Coordinator (CAC) onto our team so we could develop and test CPRS tools consistent with those performance measures, and development of a website for disseminating information regarding alcohol screening and brief alcohol counseling. This approach has often allowed us to use diffusion, rather than dissemination, for key steps in implementation (e.g., national implementation of alcohol misuse screening), which, thus far, has resulted in rapid spread, as well as sustainability (Bradley et al., 2006; Bradley et al., 2007).

The Alcohol Misuse Work Group meets monthly by teleconference to discuss specific issues regarding implementation. This year, discussions with the AMWG were used to share projects that QUERI investigators were working on, and to evaluate possible collaborations for the future.

Using these approaches, the SUD QUERI Clinical Coordinators and the alcohol misuse work group have improved VA care for patients with alcohol misuse in the following ways since 2004:

(i) Implementation of Evidence-based Alcohol Screening, including:

2004: Implementing evidence-based screening for alcohol misuse with the AUDIT-C in the VHA nationwide using a performance measure and self-scoring clinical reminder (2004);

2004-5: Monitoring screening using EPRP medical record reviews and SHEP surveys to identify variability;

2004: Developing a Frequently Asked Questions (FAQ) document, with links in OQPs website and Technical Manual; listed first on google.com search of the term “AUDIT-C”;

2004: Evaluating barriers and issues in the field related to alcohol misuse screening with the AUDIT-C based on contact from sites nationwide via email link for assistance in FAQ;

2006-7: Evaluating discordance between AUDIT-C screening on SHEP surveys and EPRP reviews of CPRS for patients in both datasets & presenting results to CMO’s;

2006-7: Consulting with OMHS and OQP in development of a revised alcohol screening performance measure to improve the quality of screening;

2006-7: Collaboration on and testing by Ms Achtmeyer of revised CPRS clinical reminder for alcohol screening to meet new performance measure;

2007: Suggestions for edits to the technical manual and CPRS clinical reminder to encourage that screening questions are asked verbatim, in a nonjudgmental manner and in private;

2007: Evaluation of the quality of screening across diverse groups of veterans based on age, gender and race/ethnicity, with results showing no significant differences;

2007: Evaluation of alcohol screening implementation using the Greenhalgh model, leading to a recommendation for an increase in the screening threshold to decrease false positives.

(ii) Preparing for Implementation of Brief Alcohol Counseling, including:

2004-5: Conducting an effectiveness trial of a clinical reminder for brief alcohol counseling in VISN 20 at a site where few providers used clinical reminders;

2004-5: Ethnography of brief alcohol counseling during audiotaped primary care appointments of patients who misuse alcohol revealing need for primary care provider skills development (McCormick et al., 2006);

2004-7: Testing the CPRS clinical reminder for brief alcohol counseling in an 8 site facility where providers use clinical reminders (~ 2/3 patients had brief alcohol advice documented using the clinical reminder);

2005-6: Evaluating clinical reminder components used by providers when documenting brief alcohol counseling(VISN 20 single site study);;

2005: Identifying 2 potential "active ingredients" of efficacious brief alcohol counseling based on review of brief intervention trials and review with experts (AMWG);

2006: Helping develop new EPRP data fields for potential measures of brief alcohol counseling;

2006-7: Revising CPRS clinical reminder for brief alcohol counseling to be consistent with new EPRP tested measures;

2007: Collaborating with OQP on development of a performance measure of brief alcohol counseling for alcohol misuse for rollout in FY08;

2007-8: Participating in ongoing efforts to educate the providers on brief alcohol counseling, including presentations at national conferences and conference calls, sharing of educational materials, and the posting and dissemination of a brief 3.5 minute educational video.

(iii) Preparing to Improve Management of Patients with Severe Alcohol Misuse, by:

2004: Consulting with sites setting up care management systems for alcohol dependence;

2004: Monitoring findings of a telephone based Behavioral Health Lab (BHL);

2004-6: Supporting care management programs by posting the technical manual for Integrated Outpatient Treatment proven efficacious (Willenbring & Olson, 1999) on our website;

2005: Demonstrating benefits of a telephone-based Behavioral Health Lab (BHL) for assessment of patients with alcohol misuse;

2006: Collaborating on development of new EPRP measures, tested in 4th quarter 2004 that identify patients with documented alcohol-related ICD diagnoses;

2006: Collaborating on an EPRP measure of referral for alcohol treatment and whether patients follow through with referrals;

2006: Demonstrating that as AUDIT-C scores increase patients readiness to change increases;

2006-8: Conducting epidemiology research on the association of severe alcohol misuse (AUDIT-C scores 8-12) and medical and surgical outcomes (Au et al., 2007);

2006-8: Conducting a trial to evaluate naltrexone treatment for alcohol dependence in primary care settings;

2008: Identifying the association of zones on the AUDIT-C associated with increasing prevalence of past year alcohol dependence;

(iv) Developing Electronic Systems of Monitoring Care for Alcohol Misuse, by:

2004-7: Monitoring use of CPRS self-scoring AUDIT-C clinical reminder by sites;

2004-7; Testing clinical reminders to monitor brief alcohol counseling electronically as requested by Performance Measures Work Group in 2005-2006;

2004 -7; Testing clinical reminder reports to monitor brief alcohol counseling at a distant site;

2006 -7: Beta-testing a new CPRS "patch" (2006) which would "roll up" all mental health screening data nationally, including AUDIT-C data (Ms Achtmeyer 2006);

2006-7: Revising a CPRS clinical reminder for brief alcohol counseling to match a pilot indicator of brief alcohol counseling that EPRP tested in 2006 that requires both advice and feedback linking alcohol use to health.
2008: National dissemination of a clinical reminders for brief alcohol counseling;
2008: Consulting with Corporate Data Warehouse to incorporate AUDIT-C data prior to a change in the Mental Health Assistant AUDIT-C data structure.

(v) Working on Cross-cutting issues:
2005: Collaboration with the Public Health SHG Hepatitis C group on their development of educational programs;
2006: Consulting on a 2 day brief alcohol counseling course for Hepatitis C providers that resulted in extremely positive feedback on successful implementation and patient outcomes after the course.
2006: Collaborating with the MH QUERI depression group on integrating brief alcohol counseling into the TIIDEs program;
2007: Collaboration with the National Hepatitis C Program to add an 4 minute alcohol brief intervention training video to the Hep-C website;
2007: Active involvement with the revising and updating of the VA/DOD alcohol screening and brief alcohol counseling guidelines as part of the VA/DOD Substance Use Disorders guidelines expected to be completed in 2008;
2007: Dr. Bradley currently served on the expert panel for CHIACC Plus, a Mental Health QUERI collaborative care project;
2007-8: Dr. Bradley is collaborating with Dr. Steven Dobscha's team in Portland evaluating alcohol misuse and depression in patients with chronic pain and the co-occurrence of alcohol misuse and depression and their association with the health status of veterans.

Our success to date has been dependent on an early decision to bring a national leader in CPRS informatics onto our research team to facilitate development (Ms Achtmeyer) and dissemination of CPRS products as needed, as well as our ongoing collaboration with the Office of Quality and Performance (OQP), the Performance Measures Work Group (PMWG), the Office of Mental Health Services, the VA/DoD Evidence Based Practice Work Group, national CPRS expert leaders in the field (Clinical Applications Coordinators; CACs) and programmers and managers of the Mental Health Package in CPRS. We are currently working on OQP's recent request for development and implementation of an effective national performance monitoring system for alcohol screening and follow-up.

B. Alcohol Misuse: Goal

One goal of the SUD QUERI is to develop, implement, and evaluate cost-effective systems of patient-centered, evidence-based care for VA patients with alcohol misuse seen outside specialty settings, with a long-term goal of decreasing morbidity and mortality associated with alcohol misuse among veterans. More specific objectives of the SUD QUERI under this goal are to develop and implement sustainable evidence-based practices for alcohol screening and brief alcohol counseling, as well as optimal systems of assessment and management of patients with alcohol dependence. Below we outline our aims which are constantly evaluated based on discussions with the Alcohol Misuse Work Group.

C. Alcohol Misuse: Aims

To improve the primary care management of patients with alcohol misuse outside of specialty , addiction settings, the SUD QUERI will:

1. **Implement and support ongoing evaluation and improvement of evidence-based annual *screening* for alcohol misuse among VA patients nationwide.**

2. **Implement evidence-based annual *brief alcohol counseling* for VA patients with alcohol misuse nationwide, including:**
   a. Collaborations: Continue to work with the OQP and the PMWG to develop and implement a performance measure anticipated for FY08 to monitor brief alcohol counseling for patients who screen positive for alcohol misuse;
   b. Clinical reminder development: Implement and evaluate CPRS clinical reminders for evidence-based brief alcohol counseling consistent with national performance measures;
   c. Monitoring: Monitor practice variation in implementation of alcohol screening and counseling for alcohol misuse and identify best practices;
   d. Education: Identify and implement best practices for alcohol screening and brief alcohol counseling and to implement key components of evidence-based brief alcohol counseling.

3. **Implement effective systems to *manage* patients who have severe alcohol misuse, or continued drinking despite medical or psychiatric contraindications to drinking, including:**
   a. Identify and measure gaps in care: Determine the proportion of VA patients with existing alcohol use disorder diagnoses who have received brief alcohol counseling, referral and/or alcohol misuse treatment in the past year;
   b. Barriers to referral and treatment: Address patient, provider, and system barriers to effective referral and engagement of these patients in specialized addictions treatment;
   c. Improve treatment engagement: Identify and implement effective systems-level interventions for patients who have severe alcohol misuse or continued drinking despite medical or psychiatric contraindications to drinking, but who are not ready to accept referral to specialty addictions treatment;
   d. Integrate efficacious medications: Evaluate and implement appropriate use of prescription medications (e.g., naltrexone and acamprosate) for alcohol dependence in primary care settings.

4. **Develop and implement electronic systems to *monitor quality of care* for patients with alcohol misuse nationwide, including:**
   a. Electronic monitoring of screening and counseling: proportion of eligible patients who receive alcohol screening and brief alcohol counseling;
   b. Estimate prevalence of mild/moderate and severe alcohol misuse: prevalence rates of alcohol misuse, and diagnosed alcohol use disorders and medical or psychiatric contraindications to drinking, at facility and VISN level;
   c. Estimate rates of referral and engagement: proportion of patients drinking despite diagnosed alcohol use disorders or alcohol-related medical problem who are referred to and engage in specialty addictions care.

5. **Work with the other SUD QUERI Workgroups, as well as other QUERIs or VA entities, to address the following additional *cross-cutting issues*:**
   a. Develop cross-cutting technological tools: Develop or identify and implement integrated systems (e.g., CPRS reminders, telephone assessment) to support integration of smoking, depression, PTSD, and alcohol misuse in primary care;
   b. Develop cross-cutting educational tools: Collaborate on educational tools that address brief alcohol counseling in multiple different settings.

D. Alcohol Misuse: Action Plan

In fiscal year 2009, our goal is to continue to support the OQP, OMHS, and CPRS experts in evaluation of a brief alcohol counseling performance measure and dissemination of the CPRS brief alcohol counseling clinical reminder. Specifically, this will include tracking rates of documented brief alcohol counseling and tracking the association of documented brief alcohol counseling with patient reports of brief alcohol counseling to evaluate the quality of implemented alcohol misuse screening and brief alcohol counseling. We are also developing educational products to support continued improvement in alcohol screening and evidence based implementation of brief alcohol counseling. Finally, we will conduct ongoing analyses to evaluate the quality of implemented alcohol misuse screening and brief alcohol counseling.

1. **Implement and support ongoing evaluation and improvement of evidence-based annual *screening* for alcohol misuse for VA patients nationwide:**
   a. Continue to compare alcohol screening results documented in the medical record to those on patient surveys to identify variation across sites in discordant screening results;
   b. Continue to monitor work on alcohol misuse screening and feedback to patients via MyHealtheVet, encouraging use of the AUDIT-C.
   c. Describe the national prevalence of prior alcohol use disorders, addictions treatment, discussion of referral, and completed referral for specialty treatment in patients who screen positive for alcohol misuse in VA.
   d. Evaluate patterns of screening over time to see if there are implications for a brief alcohol counseling performance measure.
   e. Continue longitudinal analyses to identify low risk groups that might need to be screened less often and high risk groups that may need to be screened more often;
   f. Continue to work with OQP to continue use of AUDIT-C questions in SHEP in order to monitor quality of screening.
   g. Adapt an anonymous web-based system for alcohol screening and intervention proven effective in college students, to use in VA settings, especially for OEF/OIF veterans.

2. **Implement evidence-based brief alcohol counseling for VA patients with alcohol misuse nationwide:**
   a. Continue collaboration with OQP, OMHS, and PMWG, to facilitate implementation of a brief alcohol counseling performance measure;
   b. Continue to make a 3 minute educational video on brief alcohol counseling available to VA providers;
   c. Evaluate the changes in quality of brief alcohol counseling over time with 2007 SHEP and SHEP/EPRP overlap sample;
   d. Disseminate a revised FAQ for alcohol screening and brief alcohol counseling and update AMWG website with added information on brief alcohol counseling to support the performance measure.
   e. Explore new ways to integrate alcohol screening and brief alcohol counseling into VA care (e.g. prompting pharmacists to counsel patients about alcohol medication interactions);
   f. Obtain RRP funding for a study using Dr. Becky Yano's survey or organizational structure of primary care linked with EPRP and SHEP data, to evaluate whether rates of documented and/or patient reported brief alcohol counseling are associated with organizational structure.

3. **Implement effective systems to manage patients who have severe alcohol misuse or continued drinking despite medical or psychiatric contraindications to drinking:**
   a. Continue to monitor the proportion of patients referred and the proportion of patients who complete referral based on EPRP medical record review, and whether these measures are associated with demographic factors (age, gender, ethnicity) or VISN;
   b. Compare brief alcohol counseling documented with a CPRS clinical reminder to that reported on patient surveys;
   c. Continue to support programs developed with expansion funding for integration into primary care of mental health care including management of alcohol dependence including development of a medical monitoring clinic;.
   d. Continue to evaluate the association of severe alcohol misuse with medical and surgical outcomes, to support calibration of the AUDIT-C for patient and provider education;
   e. Evaluate EPRP measures to identify the cohort for a future performance measure for follow-up alcohol use disorders;
   f. Develop a CPRS template and order sets to manage alcohol dependence in primary care, including medical management and lab monitoring;
   g. Develop a grant to evaluate the efficacy of the collaborative care model for medical management of alcohol dependence.

4. **Develop and implement electronic systems to *monitor quality of care* for patients with alcohol misuse nationwide (ongoing), including:**
   a. Continue beta-testing and feedback for the mental health package and clinical reminder patches that could roll-up all mental health screening data (including AUDIT-C) nationally;
   b. Monitor performance of the brief alcohol counseling performance measure through EPRP;
   c. Monitor referral to treatment for alcohol misuse in EPRP;
   d. Work on making national Mental Health Assistant (MHA) data available to researchers;
   e. Evaluate whether changes in AUDIT-C score over time are associated with changes in objective measures of health;
   f. Collaborate with groups outside VA working on national performance measures of alcohol screening and brief alcohol counseling.

5. **Work with the other SUD QUERI Workgroups, and other QUERIs or VA entities, to address the following additional cross-cutting technological and educational issues:**
   a. Improving education at the point of care by testing a link to a 3 minute demo of brief alcohol counseling (web based video): in the clinical reminder, the FAQ, and on the alcohol website;
   b. Continuing consultations regarding integrating alcohol misuse care with the TIDES Depression management program;
   c. Making the AUDIT-C available to all QUERIs.

III. Promote Evidence-Based Specialty Care for Patients with SUDs by Retaining Patients in Treatment

One broad objective of the SUD QUERI is to improve VA specialty SUD care, with the long-term goal of decreasing suffering, morbidity, and mortality associated with SUDs among veterans. Currently, no uniformly superior psychosocial or pharmacological treatment exists in terms of setting, intensity, or modality (Morgenstern et al., 2001; National Quality Forum, 2005; Project MATCH Research Group, 1997; Ouimette et al., 1997). However, as has been elucidated by Simpson (2004), a useful approach to strengthening the *system* of specialty SUD care is to enhance patient (a) referral and access, (b) initial engagement in treatment, (c)

retention in continuing care, and (d) transitional care and follow-up monitoring. A variety of evidence-based interventions has been identified that can effectively address each of these system improvement targets. In FY05, the SUD QUERI Executive Committee recommended enhancing retention in continuing outpatient care as an initial system improvement goal, reasoning that the functionality of the VHA SUD specialty system's final common pathway should be enhanced prior to working to increase access to and engagement in the system. The Committee noted that performance on treatment retention can be improved through a variety of means matched to local resources and that, after an initial focus on continuing specialty SUD care, the SUD QUERI should focus on enhancing engagement and retention in self- or mutual-help groups, such as AA and NA. This goal and related strategies anticipated most of the required services identified in the Handbook on Uniform MH Services that now provides a considerably more elaborated policy structure for availability of services for veterans with SUD.

To enhance patient retention in continuing outpatient SUD care, the SUD QUERI is building on and expanding prior work to (a) improve and implement continuity of care practices, as well as other organizational-, provider-, and patient-centered interventions, and (b) facilitate the implementation of evidence-based opioid agonist treatment that is central to treatment retention for VHA patients with opioid dependence. Work Groups have been formed to develop and carry out strategic plans in each of these two areas.

1. Improving Continuity of Care: Background

Evidence Base. The goal of enhancing retention of VHA patients in continuing outpatient SUD care is consistent with the VA/DoD Guideline for the Management of Substance Use Disorders and the OQP Continuity of Care (CoC) Performance Measure (PM). The Practice Guideline and the PM are based on substantial data indicating that duration of care is the treatment factor most consistently associated with positive patient outcomes (e.g., Crits-Cristoph & Siqueland, 1996; Donovan, 1998; Gerstein & Harwood, 1990; Moos et al., 1999; Onken et al., 1997; Simpson et al., 1979). In addition, the latest review of controlled trials of continuing outpatient care by Work Group member James McKay (2007) found that seven of 11 trials comparing continuing care to no or minimal treatment had positive results. A feature that generally distinguished studies with positive results was an active intervention to engage and retain patients in continuing care (see also McKay, 2005). For example, findings from a recently completed HSR&D randomized clinical trial by Work Group member Steve Lash (Lash et al., 2007) found that an active Contracting, Prompting, and Reinforcing (CPR) intervention led to greater patient involvement in VA SUD continuing care and a higher rate of patient abstinence in comparison to treatment as usual.

Current Practice. FY08 the standard for the OQP Continuity of Care (CoC) Performance Measure was 47% for 90-day retention of patients beginning new episodes of SUD specialty care. National performance has improved steadily from below 30% in FY03 to 47.1% in FY08 (up from 36.6% in FY06) when the standard was met by 13 VISNs (up from2 VISNs that exceeded 47% in FY06). Variability remains evident (VISN range of 34.9%-57.9% of patients meeting the CoC criteria). At the organizational level, a recent study by Work Group member Jeanne Schaefer and colleagues (2005) found deficiencies in CoC practices at many VHA residential and intensive outpatient programs. For example, SUD patients treated in inpatient/residential programs received significantly less coordinated care from staff, and staff made significantly fewer efforts to maintain contact with inpatients after discharge, than was true in intensive outpatient programs.

2. Continuity of Care: Goal

Consistent with the CoC PM, one objective of the SUD QUERI is to develop and implement sustainable patient-, provider-, and organization-targeted interventions to increase the proportion of patients beginning a new episode of specialty SUD treatment who are retained in evidence-based continuing outpatient care for a minimum of two visits/contacts in each of three successive 30-day periods. The Strategic Plan by the Continuing Care Work Group (CCWG) is guided by the QUERI Steps and consistent with the QUERI Pipeline and, ultimately, will include pilot, demonstration, and regional roll-out implementation projects, as well as negotiation with the Office of Mental Health Services (OMHS) and the CESATES for hand-off and routine use of successful implementation interventions in specialty SUD care.

3. Continuity of Care: Aims

The CCWG Strategic Plan includes the following aims:

- **Enhance and maintain VHA organizational readiness to retain SUD patients in continuing outpatient care** by (a) working with the OQP to ensure the continuation and refinement of the CoC PM; and (b) collaborating with the OMHS to develop an organizational structure that facilitates communication with, and buy-in for, the CoC PM from staff in the field. Timeline: Ongoing

- **Determine variation in current practices and practice gaps in meeting the CoC PM at the VISN, facility and program level** by collaborating with OQP and the Program Evaluation and Resource Center (PERC) in acquiring data needed to identify variations in CoC practices and gaps in meeting the PM standards. Timeline: Ongoing

- **Foster the development of new, validated performance measures of continuing SUD care** by conducting research to determine the relationship between patient outcomes and continuing care measures based on administrative data. Timeline: Ongoing

- **Enhance SUD provider readiness to implement strategies to retain patients in continuing care** by educating SUD providers about the feasibility and impact of retaining patients in continuing care to improve clinical and quality of life outcomes. Timeline: Ongoing

- **Develop and evaluate implementation of program-, provider- and patient-level interventions to enhance patient retention in continuing care**. Timeline: Medium- to Long-term

- **Develop and evaluate implementation interventions to enhance patient involvement and retention in SUD-related mutual-help groups**. Timeline: Medium- to Long-term

4. Continuity of Care: Action Plan

To accomplish these specific aims, the SUD QUERI Continuing Care Work Group is comprised of the SUD QUERI Clinical Coordinator, VA clinician-researchers and researchers, and non-VA stakeholders. The CCWG meets by conference call every two weeks for ~50 minutes. Members of the CCWG are: D. Kivlahan, PhD, Puget Sound HCS (leader); C. Timko, PhD, VA Palo Alto HCS (co-leader); J. Finney, PhD, VA Palo Alto HCS; Alex Sox-Harris, PhD, VA Palo Alto HCS; Eric Hawkins, PhD, Puget Sound HCS; S. Lash, PhD, Salem VAMC; J.

McKay, PhD, Philadelphia VAMC and CESATE, J. McKellar, PhD, VA Palo Alto HCS; J. Parker, PhD, Jackson, MS VAMC; and J. Schaefer, PhD, RN, VA Palo Alto HCS.

The action plan for the CCWG with respect to each specific aim is as follows.

a. Enhance and maintain VHA organizational readiness to retain SUD patients in continuing outpatient care.

The CCWG has recommended that the revised CoC PM be retained by the OQP until a minimum of 40% of patients in each VISN, as well as 50% of patients nationally, are retained in continuing care for the specified period or until reaching an "achievable benchmark" (Kiefe et al., 2001) based on observed distributions. In this regard, Dr. Kivlahan continues to work with staff at OQP to review the evidence-base for the measure and to monitor the integrity of the measurement and reporting process.

- In cooperation with the SUD program office in the OMHS, there is ongoing communication with the field through Outlook and bi-monthly conference calls that the CoC PM remains in place and improvement on the measure is among the criteria for consideration of requests for program enhancement funds.

- The CCWG is assisting the OMHS in identifying a CoC champion at each facility using the following methods: (a) As part of the survey through a LIP at Palo Alto (see below), we identified a CoC Coordinator or likely CoC Coordinator at the successfully performing facilities. (b) We use ongoing participation in the quarterly conference calls for VA SUD Program Leaders to communicate the need for a CoC champion. (c) We utilize the full listing of VA SUD Program Leaders to contact by email those who do not participate on the conference calls to alert them to new tracking tools and retention strategies related to CoC.

b. Determine variation in current practices and practice gaps in meeting the CoC PM.

The CCWG monitors variation on the CoC PM and on an annual basis will report performance, stratified by categories of programs providing a comparable continuum of care (e.g., predominantly residential/domiciliary versus a broad continuum of care), to facility CoC champions. Members of this CCWG (Drs. McKellar and Schaefer) collaborated with PERC to conduct a nationwide survey of 35 randomly selected inpatient/residential and outpatient SUD treatment programs from stations with high and low performance on the CoC PM. The survey covered the organization of efforts to ensure retention in continuing care, the practices that employed to meet the CoC PM, and perceived barriers to and facilitators of retaining patients in continuing care. Survey results were analyzed and reported to the field to identify practices associated with "exceptional" and less than "fully successful" performance on the CoC PM within categories of comparable facilities.

c. Foster the development of new, validated performance measures of continuing SUD care.

Although supported by considerable data at the patient level of a relationship between continuing care participation and positive outcomes, the VA CoC measure has not been validated. Members of the CoC Work Group completed analyses to determine the validity of the current CoC PM (Harris et al., 2008) and to develop better measures of CoC performance by linking the CoC and other specifications of continuing care performance to SUD patient improvement at the facility level (Humphreys et al., in press).

d. Enhance SUD provider readiness to retain patients in continuing care.

We continue to focus on developing informational tools as explained below:

- Develop and disseminate informational tools to SUD providers that highlight the importance of, and the evidence supporting, retention in continuing care. The tools also contain information on evidence-based program policies (e.g., discharge criteria; shared treatment planning) and patient-centered strategies providers can employ to enhance retention in continuing care (e.g., continuing care contracts, pocketcards summarizing the benefits of continuing care, validated manuals for telephone-based continuing care, contingency management techniques). Toward this goal, Dr. Kivlahan prepared a PowerPoint presentation on the Performance Measure that is available on the VA mental health website and announced to the field via the VHA National Addictions Outlook e-mail list.

- Based in part on a need indicated during bi-monthly national conference calls and frequent e-mail inquiries, CCWG members developed a document with Frequently Asked Questions (FAQs) from VA SUD treatment providers about the evidence-base for the measure, technical specifications and how to improve retention in SUD continuing outpatient care. In addition to answering questions, this document identified a menu of options that programs may consider to improve their performance. As a model, we used the SUD QUERI's FAQ document that was widely used by quality managers and providers to inform their adoption of the AUDIT-C screening for alcohol misuse when it was required in FY05.

- We worked with the Associate Chief Consultant for Mental Health Informatics to coordinate the addition of a brief measure to the Mental Health Assistant that will standardize baseline assessment of dimensions relevant to treatment planning and that will serve as the basis for monitoring treatment response during early recovery so that treatment plans can be adjusted to consider other alternative interventions as required by the Handbook on Uniform Mental Health Services. We anticipate developing templates that can be used in CPRS to prompt and facilitate documentation of CoC practices (e.g., before the patient is discharged, he/she should have a continuing care appointment; there should be brief assessment of, and problem-solving for, identified barriers to attendance; and the patient's discharge plan should have been sent to his or her continuing care provider) and treatment response..

e. Develop and evaluate implementation interventions to enhance patient retention in continuing care.

The interventions developed to enhance patient retention in continuing care will target organizational factors, providers, and patients. For example, effective CoC practices (e.g., appointment reminders, joint discharge planning) were identified in a recently completed survey of VHA CoC practices by Dr. Schaefer. The CPR intervention by Dr. Lash is an example of an effective provider-mediated, patient-focused intervention. Ongoing OQP data collection will allow the impact of SUD QUERI interventions to be assessed via pre-post comparisons and comparison of changes in performance on the CoC PM at intervention versus control sites.

The longer-term implementation intervention will be guided by the results of several ongoing projects described below, as well as work accomplished toward Specific Aims 1, 2, and 3 above. With one exception, these projects are funded as IIRs and we consider them pre-implementation ("intervention") projects in the QUERI pipeline. One long-term implementation

intervention developed with a Core LIP is a Consultation Resource Group available to providers who are having difficulty achieving adequate (or better) retention in continuing outpatient care.

During FY07, Work Group members McKellar and Schaefer led a project to improve CoC performance at low-performing facilities by facilitating communication between staff at programs that were having difficulty meeting the CoC measure and staff at similar facilities who had found ways to achieve high performance. Once the consultant panel was officially convened, the available providers were identified in a spreadsheet that was distributed through the VHA Addictions listserv. In addition, the function of the program and details for identifying a mentor were provided on two subsequent SUD Quarterly Conference Calls. Members of the Work Group also answered phone calls from providers who requested additional information. The mentoring program appeared to have a positive impact at several facilities.

Ongoing intervention and pilot implementation projects are as follows:

- Dr. Steven Lash recently completed an HSR&D clinical trial of a Contracts, Prompts, and Social Reinforcement (CPR) intervention (Lash et al., 2007). A total of 55% of CPR patients met the VA's SUD continuity of care performance measure, compared to 36% of those in standard treatment. On the primary outcome variable, 56% of the participants in the CPR condition were abstinent at the 1-year follow-up compared to 36% of those in STX. Post hoc analyses indicated that the intervention was particularly effective for participants with co-morbid psychiatric disorders. To follow-up on this single-site trial, Dr. Lash received HSR&D funding in late FY2006 for a new, two-site project in which a modified intervention that includes contingent reinforcement of abstinence and improved prompting of AA/NA attendance (CPR+), has completed recruitment and is in follow-up phase (CCWG member, Jeff Parker, is the Co-PI at the Jackson, MS site). They are planning an multi-site implementation effort that will be informed by a Rapid Response Project to be submitted in February.

- Dr. McKellar's HSR&D IIR-funded, randomized trial of telephone case monitoring at two intensive outpatient programs (Leavenworth and St. Louis VAMCs) is also in the follow-up phase. The objective of this project is to determine whether, following intensive outpatient SUD treatment, telephone case monitoring leads to as good or better SUD outcomes than usual continuing care. He and Work Group Member Dr. Timko are submitting a proposal that will blend lessons learned about telephone follow-up with results of her trial to facilitate mutual help involvement among patients with co-occurring SUD and other MH conditions.

- Two ongoing projects are using innovative methods to identify patients at risk of premature SUD treatment drop-out. First, Dr. Gifford of the Palo Alto HCS is conducting a PERC-funded project that is giving SUD providers timely and accessible patient feedback on perceived alliance with the provider, cravings and use, and life problems. This feedback will be put into a graphical format so that the provider can view it on a secure website. Initial testing took place in FY07 and subsequent information technology issues are pending resolution. The expectation is that providers' access to patient feedback will improve patient retention by serving as an "early warning system" that the provider will be able to use when working with the patient to prevent or delay dropout. This approach may be expanded in the future to give providers feedback on their success in meeting the PM. Second, Dr. Hawkins conducted a pilot project at VA Puget Sound HCS with university funding to determine if weekly individual assessments of psychological distress and treatment satisfaction are feasible using telephone-based interactive voice response technology (IVR), and to predict addiction treatment attendance and retention based on weekly assessments. Of 106 study

participants, 42% met dropout criteria by week 8 and 57% completed at least 6 of the 8 IVR assessments (calls) (M=4.9; SD=2.7). The results of this study suggest repeated IVR monitoring of brief measures of distress and satisfaction may be feasible in routine specialty addiction clinic settings, given modest compensation. After observing a high prevalence of early drop-out among patients with multiple episodes of specialty care, Drs. Kivlahan and Hawkins initiated a Rapid Response Project to systematically evaluate how frequently this occurs and to characterize patterns of treatment use that may suggest issues to be addressed as part of enhanced chronic disease management.

- Drs. Hagedorn and Kivlahan have an IIR project to conduct a two-site randomized effectiveness trial of contingency management (CM) interventions to improve outcomes over 1-year follow up among 360 veterans with alcohol and/or stimulant dependence. CM interventions involve providing tangible rewards, in this case a chance to win a canteen voucher, for meeting treatment goals (e.g., negative urine screens). The effects of Usual Care alone and Usual Care+CM on during and post-treatment substance use and treatment attendance and retention will be compared. Because CM poses unique challenges to broad implementation within VA (e.g., concerns related to the use of clinical funds for incentives and negative reactions to "paying people to get better"), such a trial is a necessary step to developing approaches for addressing these barriers and move toward implementation. In cooperation with the Associate Chief Consultant for Addictive Disorders within the Office of Mental Health Services, they are adapting their protocol for clinical implementation in a multi-site demonstration project.

- Drs. Krahn and Ford submitted an unsuccessful SDP application to evaluate a process improvement approach developed in the Network for Improvement of Addiction Treatment (NIATx). Subsequent developments within NIATx are being monitored to identify ways that implementation model can be adapted to priority initiatives within VHA including continuity of care and establishment of 28 new intensive outpatient programs that may benefit from involvement in a quality collaborative at program inception.

f. Develop and evaluate implementation interventions to enhance patient participation and retention in SUD-related self-help groups (SHGs).

Although self-help group involvement does not fall within the purview of the current CoC PM, it provides an important complementary element to continuing care that reduces SUD patients' relapse rates and use of services. Twelve-step facilitation is among the psychosocial treatment alternatives identified in the Handbook on Uniform MH Services. Dr. Timko recently completed a VA HSR&D IIR project to implement and validate procedures to help counselors effectively refer SUD patients to SHGs and improve patients' outcomes (Timko et al., 2006). This project randomly assigned SUD outpatients to a standard or an intensive referral-to-self-help condition and found that intensive referral was associated with more meeting attendance and involvement (e.g., having a sponsor) and better substance use outcomes at a 6-month follow-up. The validated intensive referral procedures should be efficient, inexpensive, and generalizable for use by SUD clinicians and primary care physicians in and outside the VA.

This project found that dually diagnosed patients (having both SUD and psychiatric disorders) were less likely to attend and benefit from SUD-focused SHGs than were SUD-only patients. Therefore, Dr. Timko is currently conducting a new project to implement and validate procedures to help counselors make effective referrals to dual-focused SHGs for dually diagnosed patients (DDPs). It is assigning DDPs to a standard or intensive referrals to dual-focused SHGs, to determine whether intensive referral improves patients' group participation,

substance use and psychiatric outcomes, and specialty SUD treatment retention, while decreasing patients' overall use of formal treatment services (reducing costs for VA) over a 2-year follow-up period. The long-term goal is to develop and implement guidelines to facilitate DDPs' involvement in dual-focused SHGs and thereby improve their quality of life. As noted above, she and Dr. McKellar are blending 12-step facilitation and telephone monitoring in a planned submission to promote improved continuity for DDPs following inpatient psychiatric discharge.

We expect that the results of these projects, taken together, will inform our development and implementation of the Continuing Care Consultation Resource Group and expand the range of options we can identify for programs to implement in their quality improvement efforts. Specifically, when a CoC champion calls on the Group for help, we will have experts on methods for PM improvement in the areas of contingency management, contracting-prompting-rewarding, early treatment drop-out monitoring, telephone continuing care, individualized provider feedback, and self-help facilitation. Notably, a key contribution of this Consultation Group will be to assess the extent to which facilitating program-specific combinations of methods to improve continuing care retention is linked to improved patient outcomes. If the VHA re-institutes a mandated outcomes monitoring system to assess treatment response in early recovery, it would afford an opportunity to evaluate impact on a broad scale. Piloting for such an outcome monitoring system is already underway by Work Group Member Dr. McKay and efforts are continuing to provide informatics tools that improve clinical feasibility and aggregate outcome evaluation.

B. Implementing Opioid Agonist Therapy (OAT)

The opioid agonist medications, methadone and buprenorphine, when coupled with psychosocial counseling, have been shown to be efficacious and cost-effective in retaining opioid-dependent patients in continuing SUD care. Accordingly, and per R&M Committee recommendations, the SUD QUERI is (a) strengthening and implementing a project to sustain and improve quality of care at VHA methadone clinics; and (b) implementing a plan to facilitate the adoption of buprenorphine as a treatment for opioid dependence in both specialty SUD and other settings of care.

1. Methadone Quality Improvement Project

(a) Methadone: Background. Established guidelines for methadone therapy (e.g., the VA/DoD Guideline for the Management of Substance Use Disorders) are supported by findings from a number of randomized trials (see a meta-analysis by Marsch, 1998), and afford specific guidance on effective practices for retaining patients in methadone outpatient treatment. They include providing 1) adequate methadone doses and 2) psychosocial services, 3) having a maintenance, rather than a detoxification goal, and 4) using rigorous contingency management techniques (e.g., allowing take-home doses of methadone after a patient provides a series of drug-free urine samples).

(b) Methadone: Aims. The quality improvement component of our initial implementation project (OpiATE Initiative) focused on improving the methadone therapy practices/features described above. At the end of that project, a toolkit was developed and distributed to all VHA methadone clinics not participating in OPIATE Initiative. A major component of the toolkit was the OpiATE Monitoring System (OMS). The OMS includes worksheets for tracking program practices and patient outcomes (urinalysis results), and provides graphical feedback on practices/outcomes for counselors and program leaders. The OMS also

contains evidence summaries for the four program elements, as well as multiple tools to assist in the design and implementation of quality improvement in each of the four practice areas. An SUD QUERI Methadone Quality Task Group is following-up on our prior implementation project and fostering high quality of methadone treatment and treatment retention via an intervention using the OMS at existing VHA methadone clinics. The project has been strengthened by (a) emphasizing use of rigorous contingency management techniques, (b) conducting a structured survey of current practices, and (c) enlisting the involvement of the Philadelphia CESATE.

Among the aims of this project are:

i. **Determine quality gaps in existing methadone clinic practices**, by conducting initial telephone interviews (see Aim ii below) and by collaborating with the Program Evaluation and Resource Center to resurvey VHA methadone clinics on their practices regarding dosing, psychosocial counseling frequency, maintenance/ detoxification orientation, and use of contingency management techniques (survey completed, October 2006).

ii. **Implement and evaluate an intervention to facilitate high-quality methadone treatment,** by

- In FY06, we re-contacted leaders from existing VA methadone clinics, as well as the leaders of new methadone clinics developed under the Mental Health Strategic Plan to inform new clinic leaders about the OMS and inquire about current use of OMS tools among leaders with longer tenures; inform leaders of an upcoming teleconference regarding use of the OMS; solicit clinic leaders' input regarding information that would be most useful to cover in the conference; and to offer them individualized assistance in implementing the OMS following the conference. Our IRC contacted the leaders of 32 of the 34 existing VHA methadone clinics. Of those, 19 indicated they had a copy of the OMS that was sent earlier to all clinics; the other 13 were sent new copies. Seven clinics (two participated in the OpiATE Initiative) are currently using the OMS data collection and graphing functions. Enthusiasm for a telephone conference call with follow-up was high, with 31 of 32 leaders indicated interest in participating. Program leaders at Atlanta, the Bronx, Los Angeles, and Washington were willing to share their positive experiences with the OMS on the teleconference.
- Guided by prior input from clinic leaders, we conducted a teleconference on November 30th, 2006 to educate OAT clinic staff about best-practices in OAT, the OMS, how the OMS tools have been and can be used for quality improvement and practice monitoring, and how rigorous contingency management techniques can be employed to enhance patient retention in treatment. The teleconference was attended by at least 47 clinicians from methadone clinics around the country (individual lines may have been in use by groups of clinicians).
- Analysis of pre- and post-survey data is underway to assess for practice change and determine practice areas that need to be targeted for further improvement.
- Clinic leaders will be contacted individually to provide feedback on survey results regarding treatment retention and performance improvement in use of evidence-based methadone therapy practices, provide encouragement to those who are still not planning to utilize the OMS, and offer individualized assistance with technical issues, goal setting, and strategy development for quality improvement efforts. Use

of OMS tools and implementation of best practices will be documented through formative evaluation.

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2. Implementing Buprenorphine

(a) Buprenorphine: Background. Opioid dependence (Raisch et al., 2002) is a chronic, relapsing, medical disorder that afflicts several million individuals in the United States, including 26,818 veterans enrolled in the Veterans Health Administration (VA) (Dalton et al., 2005; Mark et al., 2001; McKellar & Saweikis, 2005). Untreated or ineffectively treated opioid dependence contributes to premature mortality and increased utilization of healthcare and social services (Marsch, 1998). Illicit opioid use also contributes to increased use of other drugs and alcohol, criminal activity, and morbidity from medical disorders, including infections with human immunodeficiency virus (HIV) and hepatitis C (HCV). Opioid agonist therapy (OAT) is an effective, evidenced-based, standard of care treatment for opioid dependence (Kivlahan et al., 2007; Krantz & Mehler, 2004; Mattick, et al., 2003). Historically, OAT was restricted to methadone treatment delivered exclusively in licensed OAT Programs (OATPs). Unfortunately, only 40 VA OATP programs exist and as many as 70% of veterans with opioid dependence did not receive any OATP care over a one year time frame (Dalton et al. 2005; Mark et al., 2001).

Recently, in an effort to expand access to OAT beyond OATPs, Congress passed legislation which allows qualified physicians to prescribe and dispense approved sublingual buprenorphine (Subutex) and buprenorphine/naloxone (Suboxone) tablets (hereafter collectively termed buprenorphine [O'Connor & Fiellin; 2000]), in office-based practices for the treatment of opioid dependence (Fiellin et al., 2001; Fiellin & O'Connor, 2002; Fiellin et al., 2006). Buprenorphine has been shown to be a safe and effective treatment of opioid dependence in non-specialized, outpatient, office-based settings, including VA environments (Faluda et al., 2003; IOM Report, 2005; Stein et al., 2005). This change for the treatment of opioid dependence represents a radical shift from treatment within traditional specialty care settings to treatment within generalist *settings*, an approach advocated for by the Institutes of Medicine (Trafton et al., 2007; Vastag, 2003).

(b) Buprenorphine: Current Practice. We have recently shown that buprenorphine treatment has been slow to be adopted in the VA (Gordon, et. al. 2007). In FY2005, only 739 veterans were prescribed buprenorphine in office based practices. Therefore, In September 2005, the SUD QUERI established a Buprenorphine Task Group (BTG) of interdisciplinary addiction experts to help improve the implementation of buprenorphine OAT within VA.

(c) Buprenorphine: Specific Aims. As the nation's largest integrated healthcare network, the VA is an ideal setting in which to examine the implementation of new and novel modes of care, such as the introduction of buprenorphine into general practice. Our long-term goals are to improve clinical and functional outcomes of veterans with opioid dependence. Based on the QUERI established theoretical framework of formative evaluation and external

facilitation grounded in a PRECEDE conceptual model, our overall aim is to conduct short- and long-term processes to compare outcomes and improve the implementation of buprenorphine within VA. Specific aims of the Buprenorphine Work Group include:

i. Identifying barriers and facilitators to providing buprenorphine for Opioid Agonist Therapy.

ii. Enhancing VHA organizational readiness to provide buprenorphine treatment to opioid-dependent patients in specialty and non-specialty settings.

iii. Enhancing addiction specialty and non addiction specialist providers' readiness to prescribe buprenorphine.

iv. Enhancing patient readiness to take buprenorphine through staff training, patient orientations, and the development of a peer-to-peer support program.

v. Developing and evaluating implementation interventions to facilitate the use of buprenorphine as a means of enhancing treatment retention of opioid-dependent patients.

vi. Developing cross-cutting initiatives to provide services for patients with opioid dependence and comorbid medical and psychiatric conditions.

(d) Buprenorphine: Action Plan. The SUD QUERI Buprenorphine Task Group (BTG) seeks to accomplish the above specific aims. In FY08, the BTG was co-led by Executive Committee member, J. Liberto, MD (Baltimore VAMC), A. Gordon, MD, MPH, FACP, FASAM (primary care physician, Pittsburgh VAMC, VISN 4 MIRECC), and J. Trafton, PhD (Palo Alto HCS); its members include R. Dewey (MHSHG), D. Dorsey (EES), J. Finney, (VA Palo Alto HCS), T. Gartenmann (Physician Clinical Support System), C. Geppert (Albuquerque VAMC) A. Gifford (HIV QUERI), F. Goodman (PBM), D. Kivlahan, PhD (Puget Sound HCS), T. Kosten, MD (Houston VAMC), L. McNicholas, MD (Philadelphia VAMC), D. Oslin, MD (Philadelphia CESATE Director), and A. Saxon, MD (Puget Sound HCS). and. The group meets by 60-minute conference calls once a month. Below are the actions of the BTG, thus far, as well as the plans of the BTG to address each of its Specific Aims:

i Identifying barriers and facilitators to the implementation of buprenorphine.

- The BTG has completed and is disseminating the results of a Rapid Response Project that aimed to identify both barriers and facilitators to the implementation of sublingual buprenorphine therapy for the treatment of opioid dependence within VHA. Key informants were interviewed at sites with high opioid dependence. Utilizing PBM data, sites were identified as early implementers, modest implementers or non-implementers of sublingual buprenorphine treatment. In FY 08, data collection was completed and interview responses were coded. Preliminary data was presented at the 2008 annual meeting of the Society of General Internal Medicine, in Pittsburgh, PA, and the 2008 annual meeting of the College of Problems of Drug Dependence, in San Juan Puerto Rico. Findings of the study have informed the design of initiatives to better implement buprenorphine treatment within VHA. Two manuscripts to be submitted for peer review are currently drafted. Timeline: Short-term.

- The BTG has worked to conclude a Rapid Response Project that aimed to examine the economic impacts of buprenorphine adoption in VHA. Cost and utilization databases have been extracted, and treatment status and other variables created. This project will provide an initial "business case" analysis for buprenorphine, as well as pilot data needed to develop an IIR proposal on the economics of buprenorphine implementation. Preliminary findings were presented to the BTG in September 2007 and a paper has been submitted for peer review. Timeline: Short term.

ii Enhancing VHA organizational readiness to provide buprenorphine treatment to opioid-dependent patients in specialty and non-specialty settings.

- The BTG consulted and collaborated with Pharmacy Benefits Management (PBM), VISN Formulary Leaders and the Medical Advisory Panel. This consultation/ collaboration led to an update of the VA buprenorphine monograph for use of sublingual buprenorphine as well as sublingual buprenorphine being successfully placed on the VHA national formulary in FY06 and in FY07 Members of the BTG have been involved in addressing ongoing issues related to the PBM's Buprenorphine Criteria for Use. , In FY08 the BTG has worked with individual sites on a case by case basis to ensure that facility level Pharmacy and Therapeutics Committees approve these agents for each facility's formulary. Timeline: Short-term.

- The BTG continued to monitor the uptake of buprenrophine in the VHA. Members of the BWG published a peer reviewed paper describing the uptake of buprenorphine in the VHA. Using VHA pharmacy databases, they examined the number of physicians who have prescribed office-based buprenorphine and the number of veterans who have received office-based buprenorphine within VHA Veterans Integrated Service Networks (VISN) from fiscal year (FY) 2003 to FY2005 (the first three years that sublingual buprenorphine was available). During that period, the number of veterans with opioid dependence increased from 25,031 to 26,859 (+7.3%) and the number of veterans prescribed office-based buprenorphine increased almost 15-fold from 53 to 739. Six VISNs had no office-based buprenorphine prescribed. In FY2005, two VISNs accounted for 31% of buprenorphine prescriptions. The number of prescriptions of buprenorphine varied widely by VISN, but increased from 212 to 7,076 from FY2003 to FY2005. During this interval, the number of prescriptions per patient increased from 4.0 to 9.6 and physicians prescribing buprenorphine increased from 14 to 170. The ratio of patients prescribed buprenorphine to providers prescribing buprenorphine increased from 3.8 to 4.3 with an increase, on average, of 15.1 to 41.6 of prescriptions per provider. Thus, VHA increased, but not uniformly, the non-formulary use and number of physicians prescribing office-based buprenorphine during the first three years of availability. We are planning to continue to track PBM data over the next few years. The research team has been reconstituted to examine the trends in buprenorphine use from FY05 through FY08, with particular attention to acceleration in the uptake in buprenorphine at facilities that did not have uptake in FY 05. Timeline: Medium-term.

- The BTG currently provides active consultation to VA facilities that received specialized VACO funding to establish sublingual buprenorphine treatment capacity The BTG also assists other sites that are implementing buprenorphine for opioid dependence treatment. A paper describing this service is currently under peer review (Gordon, 2008). The services include 1) a telephone helpline and email consultation

service to connect providers to a consult service consisting of VA buprenorphine "clinical experts", 2) a resource guide regarding implementing buprenorphine, 3) a monthly listserve-newsletter ("A Tool for Buprenorphine Care"), 4) a catalogue of various policies and procedures of buprenorphine care in various sites, and 5) a VHA buprenorphine listserve that has disseminated information and increased dialogue among sites regarding buprenorphine issues, and 6) linkages with other listserves, practitioners, and services. All 14 sites that received FY2007 funding have been contacted and are in communication with the helpline and consult service. This consult service receives approximately 40-50 contacts a month (via email and phone) and distributes resource guides and example buprenorphine protocols on a monthly basis. Finally, a monthly enewsletter regarding helpful hints regarding buprenorphine care has continued in FY08. Timeline: Short-term.

- Several BTG members sit on the task group to update the Clinical Practice Guideline for the Management of Substance Use Disorders (SUD) – 07, including the two co-chairs. One of the major areas for update will be the pharmacologic management of opioid addiction with sublingual buprenorphine. The updated guidelines will inform best practices in VHA. These guidelines are currently under public review and will likely be disseminated to the field in FY 09.

iii Enhancing addiction specialty and non addiction specialist providers' readiness to prescribe buprenorphine.

- The BTG has worked closely with the VA Employee Education System (EES), CESATEs, and VISN 4 MIRECC, with representatives of each sitting on the BTG. BTG committee members comprised the planning committee and core faculty for the trainings in FY06 which targeted physicians and other providers in primary care, mental health, HIV, HCV, pain clinic (e.g. treating patients who have developed addictions to opioid pain medications), as well as specialty SUD settings. Two regional buprenorphine training conferences resulted in 18 physicians being trained. In coordination with EES, we conducted in FY2007 a systematic evaluation of prescribing practices, program evaluations and demographics of those trained. Results are in press. (Gordon et al., 2008) We sought to describe immediate and long-term provider-level outcomes of participants of the VA-EES-BTP, including the number and general characteristics of attendees, the immediate assessment and satisfaction of the trainings and whether participants received waivers to prescribe, and were they prescribing buprenorphine at least 6 months after the VA-EES-BTP. The results were as follows: Respondents (100%) reacted favorably to the training program and had acquired new skills, 40% reported that they gained knowledge and skills about prescribing buprenorphine. A majority of respondents (80%) indicated that they did not prescribe buprenorphine to patients, with a delay in receiving the waiver cited as the most common barrier to prescribing; Respondents suggested the program had minimal impact on patients – attributed to the lack of buprenorphine prescriptions written. Despite free travel and registration characteristics of the VA-EES-BTP, we found that few physicians attended the trainings (completed). As a next step, BTG members were involved in planning and presenting a one-hour cyber seminars broadcast that provided an overview on buprenorphine treatment targeted to all clinicians. The broadcasts occurred in the fall of FY 07 and FY 08. Planning with EES for additional training is ongoing. Timeline: Short-term.

- The BTG is working in conjunction with SAMHSA/CSAT's Physician Clinical Support System (PCSS), a national mentoring network, in order to link VA physicians with mentors within VA and the local community who are experienced with using buprenorphine (short-term). Several BTG members are PCSS mentors and the co-chair of the BTG and our PCSS member sit on the PCSS steering committee. With the BTG's input, the PCSS is identifying VA mentors with plans to incorporate a VA mentorship section on their website.

- The BTG has developed a "registry" of providers at successful buprenorphine implementation sites who are be willing to act as "host" sites to be visited by programs that are starting buprenorphine implementation. We already have had "host site visits" at several facilities that have been successful. Over time, disseminating "best practices" will be a concerted effort of the BTG.

- In coordination with the VISN 4 MIRECC and the CESATEs, members of the BTG have acted as a resource for programs initiating buprenorphine treatment (see above). Through this mechanism a resource guide for buprenorphine has been developed and is being disseminated to programs earmarked for specialized funding for buprenorphine implementation from VA Central Office (short-term). In addition, the resource guide is available to other sites that are considering implementing sublingual buprenorphine treatment. The purpose of the guide is to be an introduction for VA health care providers regarding office-based treatment of opioid dependence using buprenorphine. The FAQ,s and responses within the guide have been reproduced from samhsa.gov website, other web-based resources, and best-available evidence and expert opinions. The FAQ is subdivided into the following sections: 1. What You Need to Know in Order to Prescribe Buprenorphine, 2. Opioid Dependence and Prescribing Issues, 3. Pharmacy and Cost Issues, and 4. Administrative Issues. In FY08, a guide explaining various "Buprenorphine protocols at VHA facilities" was created and is distributed as needed. All print materials from the consult service were recently posted on the VHA Mental Health web site. Timeline: Short-term.

iv. Enhancing patient readiness to take buprenorphine.

- The BTG will develop a plan to have facility Buprenorphine Champions conduct orientation groups to provide patients with information about buprenorphine. Timeline: Medium-term.

- The BTG plans to develop a peer-to-peer support program that will include personal accounts of patients' successfully initiating or successfully transitioning from methadone to buprenorphine. Pilot Peer to Peer counseling groups have already started at the Pittsburgh VAMC. Timeline: Short- and medium-term.

v. Developing and evaluating implementation interventions to facilitate the use of buprenorphine as a means of enhancing treatment retention of opioid-dependent patients.

- An implementation proposal informed by the RRP, "Facilitators and Barriers to Implementing Buprenorphine Therapy for Treatment of Opioid Dependence, " is being developed by the BTG. The RRP has analyzed interview data on facilitators and

barriers to implementation, consistent with SDP reviewer recommendations from the critique of an earlier SDP proposal (Liberto, PI) "Implementing Buprenorphine Therapy for Treatment of Opioid Dependence" (SUT 04-435). Findings from this RRP, along with those from an RRP developing the "business case" for buprenorphine, will inform the design of a new implementation initiative aimed at circumventing identified barriers and capitalizing on identified facilitators. The Service Directed Project will have the primary objective of evaluating and comparing process- and patient-related outcomes of care for veterans treated with buprenorphine by clinic setting and by implementation strategy. The hypotheses are that the proportion of new veteran patients with opioid dependence who receive buprenorphine will be greater over the 6-month period after the intervention compared to the 6-month period prior to the intervention at the intervention sites and greater than patients at the matched standard-of-care sites. In addition we expect that the 3-month retention rate for new opioid-dependent patients treated with buprenorphine OAT during the 6-month period after the intervention at the targeted sites will be greater than the overall retention rate for patients entering SUD treatment over the 6-month period prior to intervention and greater than patients at the standard-of-care sites. Timeline: Medium-term.

- In collaboration with EES, the BTG conducted a systematic evaluation of prescribing practices, program evaluations and demographics of those receiving VA buprenorphine training. (completed, see above).

vi. Develop cross-cutting initiatives to provide services for patients with opioid dependence and comorbid medical and psychiatric conditions.

- Buprenorphine has great promise in treating injection heroin use among patients with HIV, and, to a lesser extent with HCV, thereby reducing the likelihood of co-infection and the spread of infection to other individuals. For patients with HIV, buprenorphine appears to have fewer adverse interactions with antiretroviral therapy than does methadone (McCance-Katz, 2005). Allen Gifford, Co Research Coordinator of the HIV/Hepatitis QUERI was added to the BTG in 4th Quarter FY06 and collaboration is ongoing with the HIV/Hepatitis QUERI in order to facilitate sublingual buprenorphine treatment intervention in HIV, Primary Care and Hepatitis C treatment settings. Dr. Gifford has been an active participant in the planning of implementation strategies. Timeline: Short- and medium-term.

IV. Enhancing Effective Treatment for Tobacco Use/Nicotine Dependence

A. Tobacco Use/Smoking Cessation: Background

Our approach to treatment is based primarily on the 2004 VA/DoD Guideline for Management of Tobacco Use. This guideline takes a public health approach to tobacco use/smoking cessation (TU/SC), focusing on providing care to the entire population of smokers seen in the VHA. The guideline also clearly recommends that all tobacco users receive counseling and smoking cessation medications in the most intensive setting they are willing to attend. The SUD QUERI is focusing on testing innovative strategies for implementing these guideline recommendations, while at the same time adding to the VA's knowledge of implementation research. The aims and strategies described below highlight many of the gaps in current knowledge. For example, although we know a great deal about the number of patients receiving smoking cessation prescriptions within the VHA, we still know relatively little

B. Tobacco Use/Smoking Cessation: Goals

The TU/SC goal of the SUD QUERI is to develop, implement and evaluate cost-effective interventions for increasing access to and use of evidence-based smoking cessation treatment, with the long-term objective of decreasing the high level of medical morbidity and premature mortality associated with tobacco use among VHA patients. In addition, we are particularly interested in interventions that target special populations with a high prevalence of smoking, such as veterans recently released from military service or veterans with mental health disorders.

C. Tobacco Use/Smoking Cessation: Aims

The SUD QUERI TU/SC Work Group has identified four aims. Work accomplished and planned under each aim is described below:

1. Assess current smoking cessation practices and quality of care, by

a. Identifying the structure of care for TU/SC across the VHA. The VHA Survey of Primary Care Practices (Yano et al.) was scheduled to be fielded in Summer, 2005, but it was delayed because of tremendous interest among investigators and VA Central Office. The goal of the survey is to assess the structure of ambulatory care at all VA sites, and it includes 5-10 questions on TU/SC. The survey was split into two components – a Chief of Staff module and a Primary Care module. The Chief of Staff module was recently completed, and the Primary Care Module (which includes the TU/SC questions) was fielded in Summer, 2007. These results are currently being analyzed and two abstracts linking the survey with SHEP data were submitted to the 2009 Annual VA HSR&D Meeting.

b. Conducting a Smoking and Tobacco Use Cessation Survey (Matthews/Hamlett-Berry). The survey was administered in Summer, 2005 by the VA Healthcare Analysis Information Group (HAIG), with responses received from all but one VA nationwide (99% response rate). It focused on the structure of care for TU/SC and provided a more detailed examination of the structure of smoking cessation care. Summary results from the HAIG survey are available at http://vaww.va.gov/haig/smoking/STUC_2005.pdf *(Office of the Assistant Deputy Under Secretary for Health for Policy and Planning, 2006)*, with further analysis to follow. Results were instrumental in helping to develop the new national VA smoking policy (expected to be approved in December, 2007), which has focused on eliminating the remaining indoor smoking areas in VA facilities. A follow-up survey is planned for 2009

c. Assessing the quality of care for TU/SC among VA patients. Dr. Scott Sherman (Manhattan) is working with the VA Office of Quality and Performance and the VA Public Health Strategic Healthcare Group to analyze data from the VA Survey of Healthcare Experiences of Patients (SHEP) and the Pharmacy Benefits Management Group to assess the quality of smoking cessation care for VA patients. The project has received

all of the data from OQP. Putting all of the SHEP data into a form that can be analyzed has been completed for the outpatient SHEP data but has been challenging for the inpatient data. One important finding from analyzing the data is that VA policy efforts – particularly the new smoking cessation performance measures – have led to dramatic increases in the provision of medications to help patients quit smoking. Since 2002, the percent of smokers receiving medications to help them quit has risen from about 7% to about 30% each year.

2. **Promote system changes to improve smoking and tobacco use cessation,** by

   a. **Developing and adopting newer, more stringent evidence-based OQP Performance Measures.** The TU/SC Technical Advisory Group, VA Public Health Strategic Healthcare Group, and Office of Quality and Performance worked jointly to develop new TU/SC performance measures, as previous ones suffered from ceiling effects. The new measures, which were adopted at the beginning of FY07, are
      - *Were smokers counseled about cessation?*
      - *Were smokers offered medications to help them quit?*
      - *Were smokers offered referral to a more intensive program?*

      Unlike previous measures, the VA Performance Measures will assess performance using the VA clinical reminder system.

      As above, this has led to a dramatic increase in the number of smokers receiving prescriptions for smoking cessation medications. Current analyzes are focusing on whether this has led to a concomitant decrease in the prevalence of smoking.

   b. Drs. Sheinlukht, Smelson and Sherman have modified and are piloting an Organizational Change smoking Intervention in 2 of the CBOC's in VISN 1 with funding from a VA Rapid Response HSR&D Mechanism. This project intends to test the feasibility of implementation in these two VA CBOC's as a pilot for a larger study. This organizational change intervention is a multilevel model that targets administrators, clinical staff and patient at those CBOC's. The evaluation will be based in part on Simpson's conceptual framework for translating research into practice.

3. **Increase use of effective smoking cessation treatments,** by

   a. **Increasing use of telephone counseling for TU/SC.** Dr. Scott Sherman has completed enrollment for a VISN-HSR&D Collaborative Study to expand upon the work of a SUD QUERI-funded two-year demonstration project. The project involves implementing a system for increasing referrals to telephone counseling at 35 sites in VISNs 21 and 22 (California and Nevada). An abstract summarizing the main results will be presented at the 2009 HSR&D Meeting. During the 18 month intervention period, the project received 6,118 referrals. Proactive contact patients were more likely to enroll in the program (1725/3035 = 57%) than reactive contact patients (987/3083 = 32%) (OR 2.8, 95% CI 2.5-3.1). Of the patients who had reached 6 month follow-up, 21% were abstinent. Abstinence rates were comparable across groups – proactive self-help, 20%; proactive quitline, 25%; reactive self-help, 15%; reactive quitline, 22%. The site survey, currently in progress, is evaluating the process of care at each site, and uses components of several implementation research models (Simpson, PRECEDE, and PARIHS). Dr. David Macpherson is currently leading a VISN project that is contracting with a non-VA QuitLine (Free & Clear) to provide telephone counseling to patients and employees at the Pittsburgh VA. They received 950 referrals in FY07 for a total of 1564 since the start of the program. Enrollments in the last three months have been up 30%,

perhaps because many who relapsed have been interested in receiving varenicline. The 6-month abstinent rate (counting all people who could not be reached as smokers) is 20%.

b. Increasing use of Smoking Cessation Clinics. Efforts in this area will build upon work by Dr. Kevin Volpp (Philadelphia), who recently completed a pilot study of using patient financial incentives to increase initial and continued attendance at a Smoking Cessation Clinic (Volpp et al., 2006). With funding from the CDC, he has conducted a larger, more generalizable study of this approach among employees of General Electric nationally, the results of which will soon be published in the *New England Journal of Medicine*.

c. Direct recruitment of smokers for telephone counseling. In an add-on to TeleQuit, Dr. Sherman conducted a study of three approaches to direct marketing. Using the clinical reminders to identify smokers, he compared three different invitation letters – a standard letter, a lottery letter, and an offer of free patches. Unlike some previous suggestive data, response was rather low overall (only 3-4%). However the program did represent a relatively inexpensive approach to reaching patients, with a cost of $180 per enrolled patient.

4. Increase smoking cessation treatment rates among special populations, by building on ongoing QUERI Step 4 and Step C projects:

a. Hospitalized patients. Dr. Duffy (Ann Arbor) is conducting an SDP to evaluate the implementation of a comprehensive intervention of hospitalized patients that incorporates follow-up telephone calls, and that is currently being implemented at facilities across VISN 11.

b. Racial/ethnic minorities. Dr. Steve Fu (Minneapolis) has had a VA HSR&D CDTA focusing on TU/SC among racial and ethnic minorities. With mentorship from Dr. Sherman and others, Dr. Steve Fu has a recently funded IIR to conduct a population-based, multi-site study evaluating the effectiveness of proactive outreach strategies linking racially and ethnically diverse veteran smokers to evidence-based treatments for TUC. The project is in the start-up phase. Drs. Fu and Sherman, along with Dr. Melissa Farmer, have been conducting an analysis of the national VA outpatient FY02-FY04 SHEP survey to examine racial/ethnic variations in smoking cessation treatment for veterans. Dr. Fu published four papers on this topic during 2008.

c. Telephone Quitlines and patients with Mental illness. Drs. Sherman and Smelson have begun TeleQuitMH, a study of telephone care coordination for smokers in mental health clinics at all facilities in VISNs 1 and 3. Patients will be randomly assigned to receive multi-session counseling either from the state Quitline or from VA counselors, to help determine what the best way is to provide counseling for VA patients with mental illness. Using a four-phase QUERI model of implementation, the proposed project is a Phase 2 “efficacy” study of an organizational intervention under somewhat idealized conditions. The formative evaluation will be guided by three theoretical approaches – Stetler’s phases of evaluation, along with the RE-AIM and PARIHS frameworks.

D. Tobacco Use/Smoking Cessation: Potential and Ongoing Cross-cutting Initiatives

The TU/SC Work Group will explore opportunities for implementing evidence-based practices for veterans who smoke and have other comorbid conditions. Step C work is ongoing,

focusing on PTSD (CSP #519, PI's McFall and Saxon, is comparing whether smokers with PTSD are more likely to quit if referred to a smoking cessation program or if their smoking cessation care is integrated into their PTSD treatment) and other substance use disorders (McFall et al., 2007). Drs. Saxon (Seattle) and Kosten (Houston) have been conducting a contingency management based intervention in patients diagnosed with schizophrenia and other psychotic disorders. Results are expected to inform future directions in smoking cessation care at the local level within respective VA systems for patients with psychotic disorders. A number of other comorbid conditions could be targets for future collaborative work.

E. Tobacco Use/Smoking Cessation: Action Plan

Much of the action plan for the TU/SC Subgroup has been outlined above. In addition, we will do the following:

1. Develop an integrated and high-functioning Subgroup composed of SUD QUERI Executive Committee members and other key VA and non-VA stakeholders.

- This group has been convened. We are currently discussing how this group will differ from the TU/SC Technical Advisory Group of the PHSHG, since there is considerable overlap between the two. Further meeting and planning is scheduled for January, 2009.

V. Improve Services for Patients with SUDs and Co-occurring Conditions

As noted in earlier sections, some cross-cutting projects already are underway to focus on improving services for patients with SUDs and co-occurring conditions. At its August 2007 meeting, the SUD QUERI Executive Committee reaffirmed two broad initial foci with respect to comorbidities of patients with SUDs: infectious diseases and psychiatric disorders. Based on their prevalence, illness burden, and health care costs, the two specific comorbid infectious diseases to be initial improvement targets by the SUD QUERI, in collaboration with partners, are viral hepatitis (especially hepatitis C) and human immunodeficiency virus (HIV). Because SUD patients often are co-infected, or at-risk for co-infection with viral hepatitis and HIV, and consistent with the new hepatitis co-focus of the former HIV QUERI, we are addressing these two infectious diseases in conjunction with each other. With respect to psychiatric disorders, depression and PTSD remain two common comorbidities of patients with SUDs. An overview of the work and related FY08 plans within each of these co-morbidities is presented below:

1. Liver Health Initiative for <u>Patients with SUDs and Viral Hepatitis</u>.

Work focused on patients with comorbid SUDs and viral hepatitis is being accomplished in collaboration with VHA Hepatitis C Resource Centers and is drawing on tools and procedures formulated and being tested in the LIP-funded Liver Health Initiative of our Implementation Research Coordinator. The initiative is assisting SUD clinics in (a) implementing universal testing for hepatitis C infection, and for hepatitis A and B infection and immunity; (b) providing comprehensive patient education on liver health; (c) implementing immunization for hepatitis A and B for high-risk patients lacking immunity; and (d) for hepatitis C positive patients, increasing rates of successful referral to a hepatitis clinic. A pilot Healthy Liver program has been established at the Minneapolis VAMC. Evaluation of this program has been published in the *Journal of Substance Abuse Treatment*. Patients entering SUD treatment at the Minneapolis VAMC receive testing for hepatitis infections at intake and attend a program where they participate in an educational group and then meet individually with an RN to review their lab results, receive vaccinations

for hepatitis A and B, if appropriate, and receive an expedited referral to the hepatitis clinic, if needed. In 2008, a pre- and post-questionnaire was completed by 104 patients who received these new hepatitis services at the Minneapolis VAMC. The survey demonstrated significant improvement in scores on a knowledge questionnaire given prior to and following the educational group. The majority of patients were accepting of the idea of vaccination prior to the program. Of the minority that stated they were unlikely to accept vaccination prior to attending the group, 92% reported receiving a vaccination at the group. The majority of patients reported they were satisfied with the group and the component that was rated the most helpful was "getting my personal lab results explained to me by a nurse".

Tools, procedures, and lessons learned from the establishment of the pilot program were used in the development of a preceptorship program sponsored by the Minneapolis HCRC to facilitate the spread of the Healthy Liver program to additional VA SUD treatment clinics. Currently, two preceptorships have been held (April 2006 and April 2007). Implementation teams consisting of two SUD providers and one gastroenterology provider from 25 VAMCs have attended the preceptorships. Evaluation data from the April 2006 preceptorship demonstrated that 4 of 11 attending clinics fully implemented a Healthy Liver program. An additional 6 clinics implemented services to address some of the Liver Health Initiative goals (e.g., developed a comprehensive patient education program on hepatitis infections, developed a method for providing hepatitis A and B vaccinations within the SUD clinic). Only one clinic did not implement new services. Of five comparison clinics that received educational materials in the mail, two clinics implemented one new service and three clinics did not implement any new services. These findings were presented at the Academy Health meeting in June, 2007. Analysis of the evaluation data from the 2007 preceptorship is underway. Dr. Hagedorn, with consultation from Dr. Cheryl Stetler is currently working on a retrospective evaluation of the preceptorship program using the PARIHS implementation framework. This evaluation has suggested several potential improvements to the intervention and its evaluation. The evaluation has also suggested several implementation science hypotheses regarding the relationship between context sub-elements, type and intensity of facilitation provided, and effectiveness of the preceptorship model that can be tested during future preceptorship programs. This evaluation was submitted to *Implementation Science* and is currently undergoing revisions. Finally, Dr. Hagedorn and the Minneapolis HCRC are in negotiations with the VISN 23 leadership to hold a VISN-wide Liver Health Preceptorship in FY2009. This will provide an opportunity to compare the effectiveness of the preceptorship with all volunteer participants (as done in 2006 and 2007) to the effectiveness when facilities are required to send teams to the program.

In addition, as noted earlier, our Clinical Coordinator, Dr. Kivlahan, collaborates with the PHSHG regarding issues around Hepatitis C and substance use.

2. <u>Patients with SUDs and HIV</u>.

Management of patients with SUDs and comorbid HIV is a target of collaboration between the SUD and the HIV/Hepatitis QUERIs. Building on the FY06 work of the joint SUD-HIV/Hepatitis Task Group (Dookeran et al., unpublished work) finding that only 19.6% of a national sample of patients with histories of SUD had received HIV education and testing, and then only if specifically requested, Dr. Hagedorn, Dr. Henry (HIV/HEP C QUERI IRC), and Dr. Anaya (HIV/HEP C QUERI Investigator) have established a working group to begin developing a line of implementation research to promote rapid HIV testing in SUD clinics. In FY2008, Drs. Anaya, Hagedorn and Randal received RRP funding for a developmental formative evaluation of three VA SUD clinics. Using the PARIHS

implementation framework as a guide, the evaluation includes: 1) semi-structured interviews with key management and staff regarding current HIV testing practice and site specific barriers and facilitators to implementation of rapid HIV testing; and 2) a survey of staff regarding the perceived utility of implementation of rapid HIV testing, the strength of evidence for implementation of rapid HIV testing, and organizational context factors known to impact implementation of new and innovative practices. Preliminary results from the semi-structured interviews indicate that major barriers include the perception that HIV testing is the responsibility of primary care, concerns about increased workload, and anxieties about communicating positive test results. Despite these barriers, the majority of interviewees expressed that addressing infectious disease is within the SUD clinic mission and that rapid HIV testing in the SUD clinic would be advantageous to patients. Interviewees suggested that implementation would be facilitated by training that emphasizes communications skills, securing a private setting for pre/post test counseling, and on-site/on-call mental health specialists to assist with positive results. Data analysis and write up will be completed in FY2009. Drs. Anaya, Hagedorn and Randal plan to submit an SDP application for development and piloting of an implementation strategy that addresses staff concerns, policy barriers, and the need to develop linkages between SUD clinics and HIV/AIDS clinics.

Buprenorphine can be an effective treatment for opioid addiction among HIV+ patients. (Fiellin, 2004; McCance-Katz, 2005). However, a recent report concluded that barriers to the integration of buprenorphine in HIV primary care include “lack of expertise, bias, intolerance, lack of patient-physician trust, and lack of resources” (p. 8, Forum for Collaborative HIV Research Workshop, 2004). Similar barriers may exist to providing effective brief interventions for alcohol misuse in HIV clinics or HIV primary care. To explore these issues, in FY06, the SUD and HIV/Hepatitis QUERIs formed a Task Group co-led by Dr. Gifford, Co-Research Coordinator of the HIV/Hepatitis QUERI, and by Dr. Gordon of the SUD QUERI Buprenorphine Task Group. Dr. Kosten met with the HIV/Hepatitis QUERI Executive Committee in September 2006 to prioritize future implementation collaborations including: (i) Rapid HIV testing in SUD clinics (following resolution of VA policy issues under review by the PHSHG), (ii) Access to buprenorphine in selected HIV clinics with high opioid use, (iii) Appropriate pharmacotherapy for alcohol dependence in HIV clinics, and (iv) Continued collaboration on smoking cessation for HIV/AIDS patients as part of Dr. Sherman’s implementation project in VISNs 21 and 22. In 2007, our collaboration has addressed several of these priorities: (i) Policy issues on this HIV testing, including counseling, on the testing are still resolving. We have identified the station-level prevalence of patients with comorbid HIV and diagnosed opioid dependence from the HIV registry in order to target those needing HIV testing, and we have provided input on items to assess screening and counseling for HIV in an ongoing SUD providers’ survey. (ii) We are identifying VHA HIV providers who are willing to receive the required training and DEA waiver to allow them to prescribe buprenorphine and arranging consultation for them. We also are expanding our joint efforts to implement the use of buprenorphine with opioid-dependent patients, with or at risk for HIV, in stations that do not have methadone maintenance. (iii) In Houston and other VA sites with large HIV clinics, we have begun systematic inservice training at the HIV clinics on how to use available alcoholism relapse prevention agents, such as naltrexone and acamprosate. (iv) Smoking cessation pilot studies have begun in several HIV clinics, including Houston, where a proposal for tele-monitoring for relapse prevention has been adapted from a successful NCI and NIDA-funded program for smoking cessation in non-VA HIV patients.

3. Patients with SUDs and Depressive Disorders.

SUD and depressive disorders commonly co-occur. The Epidemiological Catchment Area Study found 13.4 % of persons with a lifetime alcohol disorder and 26.4% of those with a lifetime drug use disorder also had a lifetime affective disorder. The National Comorbidity Study found a greater prevalence of such comorbidity— for example, 24.3% of men and 48.5% of women with a lifetime alcohol disorder also reported a lifetime major depressive disorder. More recently, the National Epidemiologic Survey on Alcoholism and Related Conditions found that 40.3% of persons surveyed meeting DSM-IV criteria for lifetime MDD also met criteria for either alcohol abuse or dependence. Substance use treatment samples report even higher levels of comorbidity— with some studies finding 50-70% of individuals in treatment for substance disorders have comorbid depression.

SUD treatment guidelines recommend pharmacotherapy for comorbid depression if symptoms persist after a 4-week "wash-out" period for detoxification, and sooner in cases where the depressive disorder is considered primary. Practice guidelines also recommend rapid introduction of evidence-based therapies such as cognitive behavioral therapy (CBT) and Interpersonal Therapy (IT). Guideline-concordant management of depression for persons with comorbid substance use and depressive disorders, however, is not routine in many VA SUD treatment settings. Practice guidelines for primary care recommend screening for both depression and alcohol use along with brief interventions for alcohol use and "collaborative care" interventions for depression. The Uniform Mental Health Services Package includes these practices; hence, they are considered essential components for national implementation in the VA. The SUD and Depression Task Group is charged with prioritizing and leading the efforts of SUDQ and MHQ members in developing research projects to improve care for persons with co-occurring SUDs and depression. The Group's implementation research foci will be guided by the Uniform Mental Health Services Package and VA/DOD practice guidelines.

The Task group is co-lead by SUDQ and MHQ Executive Committee member Geoffrey M. Curran, PhD (Central Arkansas Veterans Healthcare System) and Steven Dobsha, MD (Portland VAMC). The group meets monthly by conference call. Aims are to: (i) promote and improve implementation of integrated collaborative care models in primary care for depressive and substance use disorders (especially alcohol); (ii) promote and improve implementation of evidence-based practices for depressive disorders in SUD treatment settings; (iii) support research investigating new best practices for VA and/or greater specification in current practice guidelines; (iv) contribute the VA strategic planning on performance measurement; and (v) document disparities in comorbidity of SUDs/depression and in receipt of best practices.

Toward fulfillment of the above goals, group members are conducting a range of projects. For example, a newly-funded SDP, "Training SUD Counselors CBT for Depression" (PI, Curran; Co-PI, Weingardt) will adapt, through iterative cycles of development, stakeholder feedback, and revise an existing *CBT for Depression* manual into a web-based training module for use by VA addiction therapists. The SDP will also develop and test a supervision plan to accompany the therapist training, and a workbook for use by veterans using MyHealtheVet. Further, Task Group members have recently received approval for a new SDP, "Blended Facilitation to Enhance PCMH Program Implementation" (PI, Kirchner; Co-PI, Curran) to test a blended internal and external facilitation intervention to assist VAMCs and CBOCs in two VISNs in implementing multiple primary care/mental health initiatives (e.g., TIDES, BHL, co-located care) including screening and brief interventions for

alcohol use. This project is a collaboration among MH and SUD QUERI, two MIRECC's, and the Office of MH Services. Another project is conducting a series of analyses to evaluate the prevalence of co-occurring alcohol misuse among veterans with active depressive symptoms and identify associations between co-occurring alcohol and depression symptoms and measures of health status. Investigators are using the VA Survey of the Health Experiences of Patients (SHEP) from FY2005 (255,530 veterans treated in VA ambulatory care clinics). Additionally, task group members are exploring their existing databases regarding comorbidity of SUD/depression and disparities in the receipt of best practices.

4. Patients with SUDs and PTSD.

Approximately one-third of veterans seeking treatment for substance use disorders (SUD) meet criteria for comorbid posttraumatic stress disorder (PTSD). SUD patients with comorbid PTSD (SUD-PTSD) present with greater drug abuse severity (Clark et al., 2001), demonstrate greater trauma and drug cue-elicited drug craving (Saladin et al., 2003), and have poorer SUD treatment outcomes (Ouimette et al., 1998, Rosen et al., 2002; Najavits et al., 1997) than SUD patients without PTSD. Overdoses and liver disease related to substance use are significant causes of premature mortality among VA patients with chronic PTSD (Drescher et al., 2003). Aggression is also a significant issue for veterans with PTSD and SUD (Taft et al., 2007). Receipt of PTSD treatment is associated with improved outcomes among VA PTSD-SUD patients (Ouimette et al., 2000, 2003), although simply receiving SUD treatment (the usual practice) is not as associated with PTSD improvement (Trafton et al., 2006; Najavits et al., 2007). However, there is not yet consistent screening and referral for PTSD problems in VA addiction treatment programs (Young et al., 2005). Mental health and other providers in VA who do not specialize in SUD often feel ill-equipped to manage or treat it (Tracey et al., 2007).

Dr. Lisa Najavits from the National Center for PTSD at VA Boston (VISN 1) assumed leadership of the SUD-PTSD Task Group in September, 2006. The Task Group has been expanded and now includes 26 members. A total of 13 new members has been added and two prior members have left (related to changes in their duties). This expansion has been productive in creating a network of researchers to draw upon for projects, to expand the geographic base and types of programs represented by the Task Group, and to develop new ideas for future work. The Task Group has regularly scheduled monthly meetings and documentation of minutes of each meeting. An in-person meeting was held by the Task Group at the November 2006 International Society for Traumatic Stress Studies (ISTSS) conference, and will also be held at the 2007 ISTSS meeting.

The Task Group is developing a strategic plan to (a) implement and support ongoing evidence-based screening for PTSD among veterans in SUD treatment; (b) support improved access to effective PTSD treatment for veterans identified with comorbid SUD-PTSD, through enhanced coordination of SUD and PTSD specialty care and/or through implementation of evidence-based interventions for dual SUD-PTSD patients within VA SUD addiction treatment programs; (c) promote access to effective treatment for both deployment stress and substance use problems among OIF/OEF returnees; (d) train clinicians in evidence-based therapy for SUD/PTSD; (e) adapt evidence-based therapy for SUD/PTSD; and (f) survey VA key informants on system-level needs related to SUD/PTSD treatment. One group member, Dr. Trafton (Drs. Kimerling, Najavits, and Ouimette from the Task Group are Co-Investigators), has been actively recruiting patients for her funded study of PTSD screening and Seeking Safety as a treatment for SUD patients with comorbid PTSD.

Drs. Rosen and Kimerling from the Task Group began a MIRECC-supported survey assessing rates of untreated alcohol and PTSD problems among OIF/OEF returnees entering VA care. Dr. Najavits has begun a QUERI-funded project to survey key informants in the VA regarding SUD/PTSD treatment; in addition, she has been approved for funding for an RRP on adapting Seeking Safety thearpy for SUD/PTSD for OEF/OIF veterans. Drs. Kosten and Najavits have begun a project to evaluate basic versus enhanced training for PTSD/SUD in VISN 16.

VI. Management Plan

In this section, we describe the functions of our SUD QUERI Executive Committee and how our work and task groups collaborate with the Research Coordinator, Clinical Coordinator, Co-Clinical Coordinator, Implementation Research Coordinator, Administrative Coordinator, and the staff of the Coordinating Center and Clinical Coordinating Center, to develop and carry out programs of work to accomplish the SUD QUERI goals that have been identified by our Executive Committee.

SUD QUERI Executive Committee

We have added one new member to the EC in 2008. Dr. John Allen is the new Associate Chief Consultant for Addictive Disorders who succeeded former EC Member Dr. Richard Suchinsky. He is the key section chief leading operations efforts for SUD within the Office of Mental Health Services and we have benefited from very close communication with him throughout the year. We also now list two additional Key Project Staff: Dr. Adam Gordon has taken primary responsibility for the Buprenorphine Task Group; David Smelson PsyD is now the Co-Leader of the Tobacco Use Cessation Work Group. Both of these colleagues are highly productive health services researchers who made important contributions to SUD QUERI in the past year and will assure continued emphasis on productivity in these critical areas.

The SUD QUERI Executive Committee meets in-person once a year, once at the national VA HSR&D Meeting and at the QUERI National meeting, which is in Phoenix this December. In addition, the Executive Committee has quarterly conference calls. A major function of the Committee remains to shape the SUD QUERI's research and implementation agendas. Guided by the QUERI steps, the QUERI Implementation Pipeline, and the SUD QUERI Vision Statement, the Executive Committee prioritizes specific SUD and SUD-related conditions on which the SUD QUERI should focus. In determining these priorities, the Committee considers the prevalence of specific disorders or conditions (e.g., alcohol misuse), the severity and impact of the disorder (e.g., illness burden; societal impact), as well as the strength of the available evidence concerning practices for identification (e.g., screening) and management (e.g., treatment). Progress on ongoing implementation programs is reviewed at each Committee meeting and potential foci for future implementation programs are critically discussed. In addition, the Committee reviews annual reports/strategic plans, as well as the critiques of those reports/plans by the R&M Committee. Actions to address R&M Committee recommendations are then identified.

SUD QUERI Coordinators

The SUD-QUERI coordinators have a monthly conference call. Through these calls the SUD QUERI has made a broader reach within the VA to the MIRECCs and ORD substance abuse research centers in order to be ready to implement when recently developed treatments have shown sufficient evidence of effectiveness. In addition to the sustained linkage to the VISN 1, 5, 6, 20 and 22 MIRECCs, we have initiated active collaborations with the

VISN 4 and 16 MIRECCs, as well as both CESATEs. We also continue more programmatic work with Patient Care Services, CO Program Offices, other QUERIs, VSOs, and patient representatives.

Our QUERI Research and Clinical Coordinators have been active in drafting policies and procedural documents in collaboration with Dr. Ira Katz and Dr. John Paul Allen, since he was named Associate Chief Consultant for Addictive Disorders in December 2007. We have been actively working with the HIV/HCV, Mental Health, and Polytrauma (traumatic brain injury and alcohol) QUERIs on jointly funded projects. We have two representatives from Veteran Service Organizations on the EC, who have been very active participants in the quarterly conference calls and twice yearly face-to-face EC meetings. They have also provided remarkable input to project design and implementation priorities for our QUERI, particularly in keeping us in touch with the OEF/OIF veterans. Our veteran EC members are outstanding in alerting us to what needs to change in our clinical programs in order to reach the new OEF/OIF veterans.

Our SUD QUERI has initiated more implementation projects, such as the CBT for Depression in SUD Treatment web training project and the test of a blended facilitation intervention to assist clinics in implementing primary care/mental health initiatives. Other examples of implementation projects include the clinical reminder roll-out for alcohol screening and brief alcohol counseling and for smoking cessation. Dr. Kosten has collaborated with the Houston HSR&D Center, the National Center for PTSD and the VISN-16 MIRECC on a VISN-16 wide program implementation study of "Seeking Safety" for combined PTSD and SUD. Finally, Dr. Finney and other Palo Alto colleagues have continued to be actively involved in the SUD QUERI.

The past and current Research Coordinators and the Clinical, Co-Clinical, Implementation Research, and Administrative Coordinators work together closely to implement the SUD QUERI's Goals and our Vision Statement, as well as implementation efforts. The former Research Coordinator (J Finney) directs the HSR&D Center of Excellence in Palo Alto and remains a key resource for national data on SUD, including the large data set from the Outcomes Monitoring Project he directs. The Coordinators communicate regularly with each other via a monthly conference call and, more frequently, via email or individual calls, and meet in-person at VHA and other meetings to plan and coordinate activities. To coordinate SUD QUERI activities with the agenda of the Office of Mental Health Services (OMHS), Drs. Kosten and Kivlahan, as well as the Director of the Philadelphia CESATE (Dr. McKay), participate in a monthly call chaired by EC Member Dr. Allen, the new Associate Chief Consultant for Addictive Disorders of the OMHS.

Our Administrative Coordinator facilitates communications among the Research Coordinator, Palo Alto collaborators, Clinical Coordinator's Office, IRC, and Executive Committee. She provides oversight for the general day-to-day administrative operations of the SUD-QUERI group and ensures fiscal and budgetary adherence across all SUD QUERI sites. Additionally, she coordinates the hiring of Center staff, facilitates completion of the SUD QUERI Annual Report and related budgets, and facilitates the planning and execution of the annual SUD QUERI Executive Committee Meeting. She also participates in various SUD research and implementation protocols, manuscript preparation and submission, and liaisons with community stakeholders, other research groups, and other SUD QUERI sites as a means of facilitating ongoing, undisrupted SUD-QUERI activities.

SUD QUERI Work Groups

To carry out programs of work to address its goals, the SUD QUERI has developed work groups and subdivided into task groups within two of the work groups. The groups are made up of EC members, Coordinators, and VA and other experts. They report progress to the QUERI coordinators through a quarterly conference call, as well as ongoing emails and calls. Separate Work Groups are focusing on alcohol misuse, retention in continuing care, tobacco use/smoking cessation and comorbidity with substance abuse. The Alcohol Misuse Work Group is led by our Co-Clinical Coordinator, Dr. Bradley, the Continuing Care Work Group is led by our Clinical Coordinator, Dr. Kivlahan. In an effort to expand the work of the Tobacco Use/Smoking Cessation Work Group we have added Dr. David Smelson, who focuses on smoking in psychiatric populations, to complement the work of Dr. Scott Sherman (Executive Committee member), who focuses on smoking in primary care veterans. The Comorbidity Work Group is led by our Implementation Research Coordinator, Dr. Hagedorn. Administrative support for the work groups is provided by the SUD QUERI Administrative Coordinator in Houston.

In addition, collaborative **TASK GROUPS** have been formed within two of our Work Groups. In the Continuing Care Work Group we have task groups for opioid agonist treatment with buprenorphine or methadone (which both promote treatment retention). The Buprenorphine Task Group is co-led by Drs. Adam Gordon (Pittsburgh), Joseph Liberto (an Executive Committee member at Baltimore), and Jodie Trafton (Palo Alto), and the Methadone Task Group is led by our Implementation Research Coordinator, Dr. Hagedorn.

The Comorbidity Work Group includes three task groups. Two focus on psychiatric comorbidity: depression (co-led by Drs. Steven Dobscha; and Geoff Curran, an Executive Committee member and Associate Director of the Mental Health QUERI Coordinating Center) and PTSD (led by Dr. Lisa Najavits - NCPTSD). Another task group focuses on infectious diseases: Hepatitis C and HIV, (co-led by Dr. Hagedorn and Dr. Allen Gifford, Research Coordinator of the QUERI HIV-Hepatitis). In some cases, these collaborative task groups draw upon members from the main SUD QUERI work groups (e.g., alcohol misuse).

In conjunction with the Executive Committee, the SUD QUERI work groups are developing action plans and collaborating with various VA and/or non-VA partners in implementing their plans. VHA collaborations are shown in the wiring diagram and key examples include:

- Alcohol Misuse Work Group - the Office of Mental Health Services (OMHS), Primary Care and Mental Health Integration Program in the Office of Patient Care Services, Seattle Center of Excellence in Substance Abuse Treatment and Education (CESATE), primary care mental health integration program, and the Office of Quality and Performance (OQP);
- Continuing Care Work Group - the CESATEs, OMHS, Program Evaluation and Resource Center (PERC), Pharmacy Benefits Management Group (PBM), Employee Education System (EES) and OQP;
- Buprenorphine Task Group- the OMHS, the CESATEs, EES, PERC, VISN 4 and 5 MIRECCs and the PBM;
- Tobacco Use and Smoking Cessation Work Group - the Public Health Strategic Health Care Group (PHSHG), VISN 6 and 20 MIRECCs and OQP, SCI QUERI.
- Hepatitis-C and HIV Task Group - HIV-Hep C QUERI, Hepatitis C Resource Centers and PHSHG;
- SUD-Depression Task Group - the OMHS, EES, Several MIRECCs, and the Mental Health QUERI;
- SUD-PTSD Task Group - VISN 1,16, 20 and 21 MIRECCs and the National Center for

PTSD.

Work/Task Groups meet via conference calls (usually monthly). The progress of each work group is reviewed on Executive Committee conference calls and at Executive Committee meetings, as well as on the Coordinators' monthly conference calls.

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